

REMARKS

Upon entry of the amendment, claims 5 and 7-11 will remain in the patent application.

The rejection of claims 1, 3-5, 8 and 12 under 35 U.S.C. § 102 (b) as anticipated by the U.S. Patent 3,077,572 to Zimmerman has been abandoned.

However, the rejection of claims 1, 3-5, and 7- 12 under 35 U.S.C § 103(a) as unpatentable over U.S. Patent 3,792,416 to Moulin in view of U.S. Patent 3,077,572 to Zimmerman has been repeated and made final. More specifically, the Examiner maintains that, "It would have been obvious at the time the invention was made to incorporate a skirt, as taught by Zimmerman, into a sealing device as described by Moulin, in order to make a better sealing arrangement between the inside surface of the cavity and the sealing surface and to prevent loss in the sealing contact because of excessive wrinkles. See the last paragraph on page 3 of the Office Action of May 20, 2003. This opinion is based on an allegation that Zimmerman teaches a ferrule (22) that is a seal and has a sealing surface that has the same shape as the interior surface of the cavity, a cylindrical shape. See the last paragraph on page 4 of the Office Action of May 20, 2003.

Claims 1, 3, 4 and 12 are being cancelled to reduce the number of claims in issue.

Claims 5, 8 and 9 has been amended to further distinguish the claimed skirt of applicants' sealing device from the seal receiving ferrule (22) of the conductive male element (A) disclosed in the secondary Zimmerman, Jr. '572 patent. Claim 8 has also been rewritten in independent form.

Reconsideration of amended base claims 5, 8 and 9 and dependent claims 7, 10 and 11 is respectfully requested.

Claims 5, 8 and 9 now all specify that the skirt has a sealing surface that “has substantially the same size and shape as the interior surface of the cavity **so that the skirt deforms only a small amount to form a seal between the sealing surface and the interior surface of the cavity**”.

Thus the claims now clearly and unambiguously distinguish over the seal receiving ferrule (22) of the secondary Zimmerman ‘572 patent.

The seal receiving ferrule (22) which the Examiner regards as teaching or suggesting a modification of the Moulin seal (150) **is not a seal** and consequently does not suggest anything with respect to a seal. The seal receiving ferrule (22) of the secondary Zimmerman ‘572 patent is an integral part of the male element A of an electrical connection that includes a pin (10). Male element A is made of metal and comprises a wire receiving ferrule (20) and a seal receiving ferrule (22). See column 1, lines 50-70 of the specification of the Zimmerman ‘572 patent and the metal cross hatching of the ferrules (20, 22) in figures 2-6 of the Zimmerman ‘572 patent.

The seal receiving ferrule (22) does not have a sealing surface and consequently the seal receiving ferrule (22) does not teach or suggest a sealing surface that “has substantially the same shape as the interior surface of the cavity so that the

skirt deforms only a small amount to form a seal between the sealing surface and the interior surface of the cavity” as required by amended base claims 5, 8 and 9. The outer surface of the ferrule (22) is clearly spaced from the interior surface of the cavity (48) as best shown in figures 5 and 6 of the Zimmerman ‘572 patent.

Furthermore, the seal receiving ferrule (22) of the terminal that is disclosed in the Zimmerman ‘572 patent is definitely not “constructed from an electrically insulating material” as required by claims 5, 8 and 9. The wire receiving ferrule (20) is clearly made of an electrically conductive material because it engages the bare wire (18) to conduct electricity to the male element A. Seal receiving ferrule 22 being an integral part of male element A is also made of electrically conductive material. Compare the metal cross-hatching of the seal receiving ferrule (22) and the cross hatching of the resilient seal (16).

As to claims 8 and 9, there is absolutely no disclosure or suggestion that the Zimmerman ferrules (20, 22) are made of an elastomeric material. Perhaps, the Examiner is confusing the Zimmerman ferrules (20, 22) with the Zimmerman resilient seal (16).

Moreover, the Zimmerman ‘572 patent is non-analogous art as applied by the examiner because the seal receiving ferrule (22) is concerned with attaching the seal (16) to a male element A and not with the interaction of the seal with the interior surface (48) of the cavity. The Zimmerman ‘572 patent in fact teaches away from the invention of claims 5,8 and 9 because the Zimmerman ‘572 patent suggests replacing the Moulin radially extending flange (158) with the elongate, thick, annular portion

(35) of the Zimmerman seal (16) which is clearly not "a molded skirt...comprising an interior surface and a sealing surface."

Thus amended base claims 5, 8 and 9 are not obvious in view of these two references under 35 U.S.C. § 103(b) for several reasons as indicated above.

This also applies to dependent claims 7, 10 and 11.

Reconsideration of amended claims 5, and 7-11 in view of the foregoing remarks is respectfully requested.

A copy of amended claims 5, 8 and 9 showing the deletions bracketed and the insertions underlined is attached.

If it is determined that any fees are due, the commissioner is hereby authorized and respectfully requested to charge such fees to Deposit Account No. 50-0831.

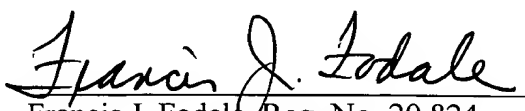
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to the Commissioner for Patents, P.O. Box 1450 Alexandria, Virginia 22313, on July 8, 2003.


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MARKED UP COPY OF AMENDED CLAIMS

5. (Twice Amended) A device for sealing a cavity comprising an interior surface, the device comprising:

a sleeve comprising a longitudinal axis and an insertion end;

a molded skirt [assembly] integrally formed on the sleeve;

wherein the skirt [assembly] comprises a first integral section extending in a plane which is substantially perpendicular to the longitudinal axis; and

wherein the skirt [assembly] comprises a second integral section comprising an interior surface and a sealing surface that extends along the length of the sleeve in a direction opposite to the insertion end such that there is a gap between the interior surface and the sleeve;

wherein the sealing surface has substantially the same shape as the interior surface of the cavity so that the skirt deforms only a small amount to form a seal between the sealing surface and the interior surface of the cavity; and

wherein the molded skirt is constructed from an electrically insulating material.

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GROUP 3600

8. (amended) [The device of claim 5 wherein said device is constructed from]

A device for sealing a cavity comprising an interior surface, the device comprising:

a sleeve comprising a longitudinal axis and an insertion end;

a molded skirt integrally formed on the sleeve;

wherein the skirt comprises a first integral section extending in a plane which is substantially perpendicular to the longitudinal axis; and

wherein the skirt comprises a second integral section comprising an interior surface and a sealing surface that extends along the length of the sleeve in a direction opposite to the insertion end such that there is a gap between the interior surface and the sleeve;

wherein the sealing surface has substantially the same shape as the interior surface of the cavity so that the skirt deforms only a small amount to form a seal between the sealing surface and the interior surface of the cavity; and

wherein the molded skirt is constructed from an electrically insulating, elastomeric material.

9: (Amended) A method of sealing an opening of a cavity comprising the steps of:

inserting a portion of a structure through a sleeve of a sealing assembly, the sealing assembly having a molded skirt constructed from an electrically insulating, elastomeric material;

inserting a section of the structure including portion of the structure inserted through the sealing assembly into the cavity through the cavity opening so that the molded skirt is in sealing contact with the inside surface of the cavity wherein the molded skirt comprises a sealing surface that has substantially the same shape as the interior surface of the cavity so that the skirt deforms only a small amount to form a seal between the sealing surface and the interior surface of the cavity.



MARKED UP COPY OF AMENDED CLAIMS

5. (Twice Amended) A device for sealing a cavity comprising an interior surface, the device comprising:

a sleeve comprising a longitudinal axis and an insertion end;

a molded skirt [assembly] integrally formed on the sleeve;

wherein the skirt [assembly] comprises a first integral section extending in a plane which is substantially perpendicular to the longitudinal axis; and

wherein the skirt [assembly] comprises a second integral section comprising an interior surface and a sealing surface that extends along the length of the sleeve in a direction opposite to the insertion end such that there is a gap between the interior surface and the sleeve;

wherein the sealing surface has substantially the same shape as the interior surface of the cavity so that the skirt deforms only a small amount to form a seal between the sealing surface and the interior surface of the cavity; and

wherein the molded skirt is constructed from an electrically insulating material.

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GROUP 3000

8. (amended) [The device of claim 5 wherein said device is constructed from]

A device for sealing a cavity comprising an interior surface, the device comprising:

a sleeve comprising a longitudinal axis and an insertion end;

a molded skirt integrally formed on the sleeve;

wherein the skirt comprises a first integral section extending in a plane which is substantially perpendicular to the longitudinal axis; and

wherein the skirt comprises a second integral section comprising an interior surface and a sealing surface that extends along the length of the sleeve in a direction opposite to the insertion end such that there is a gap between the interior surface and the sleeve;

wherein the sealing surface has substantially the same shape as the interior surface of the cavity so that the skirt deforms only a small amount to form a seal between the sealing surface and the interior surface of the cavity; and

wherein the molded skirt is constructed from an electrically insulating, elastomeric material.

9. (Amended) A method of sealing an opening of a cavity comprising the steps of:

inserting a portion of a structure through a sleeve of a sealing assembly, the sealing assembly having a molded skirt constructed from an electrically insulating, elastomeric material;

inserting a section of the structure including portion of the structure inserted through the sealing assembly into the cavity through the cavity opening so that the molded skirt is in sealing contact with the inside surface of the cavity wherein the molded skirt comprises a sealing surface that has substantially the same shape as the interior surface of the cavity so that the skirt deforms only a small amount to form a seal between the sealing surface and the interior surface of the cavity.